profits), such as videoconferencing, are dwarfed by the tremendous monopoly profit streams that would be at risk from real, facilities-based competition.

In this regard, the *Fourth Notice* inquires whether "build-out" rules can be "a sufficient check against warehousing."[37] "Build-out" requirements are undoubtedly important as a means of eliminating "trafficking" in auctioned licenses. Yet deadlines for system completion and similar build-out regulations only specify *when* some sort of service is to commence, not *what services* are to be offered. Monopoly RBOCs and MSOs have already revealed that they intend to utilize LMDS as an "adjunct" to their existing, network services—for instance tele-conferencing for LECs (a tiny market today compared to telephony voice) and video-on-demand for MSOs (an unproven set of economics compared with broadcast video). None of these uses offers anything close to the full-featured, broadband local competition LMDS is capable of providing. This simply underscores that, *whether or not an existing monopolist constructs an LMDS system, it can just as easily effectively "warehouse" the spectrum by "clamping down" on its technical potential as a form of facilities-based local competition as by letting the spectrum remain "fallow," unused* or less than optimally utilized.

E. Structuring Eligibility Restrictions. Paragraph 131 of the Fourth NPRM seeks comment on whether the Commission should structure eligibility restrictions or use the alternative of directing uses of LMDS, by incumbents, in order to assure "competitive" applications develop. WebCel does not believe that restrictions on the use of spectrum are an efficient means of regulating against the exercise of market power. Not only would they be

[37] *Fourth Notice* ¶ 130.

intrusive to business operations and both costly and difficult to enforce, but usage limitations quite clearly run up against the Commission's emerging policy of permitting flexible use of spectrum by licensees. The better approach is to ban incumbents from participating in LMDS services *until their market power has been checked by the emergence of effective competition.* In this way, incumbents and new entrants will be treated exactly alike— *any* party with a facilities-based monopoly will be barred from acquiring an LMDS license, and all parties that do not have market power will be free to compete with the spectrum in whatever way consumers in the marketplace demand.

The "advantages" of a narrow restriction are illusory. The experience of competition in wireless communications shows that incumbents will use their economic power, and monopoly rents, to impede and acquire potentially competitive technologies. RBOCs and LECs have over the past decade acquired virtually all of the "non-wireline" cellular mobile radio licenses, in turn ensuring that cellular services have been marketed only as a complement to local exchange services, not a directly competitive substitute. MSOs have used vertical integration to deny programming access to wireless competitors such as MMDS, in order to maintain local cable system market power. The lesson is that if a monopoly incumbent is permitted to enter even part of a competitive service, the technology will be stifled, over-priced and never developed as a full-fledged threat to the incumbent's "core" monopoly services.

F. Definitions and Attribution. WebCel agrees with the *Fourth Notice's* suggestions to use the cellular/PCS "20%" rule to define an "in-region" BTA where LEC and MSO service areas differ from LMDS license areas (*id.* ¶ 132). We believe the same rule should apply to both LECs and cable operators, particularly in light of the smaller size of cable franchises

relative to BTAs. We also agree that the 10% attribution standard, under which an incumbent interest of 10% or more would be attributable, is a reasonable approach. *Id.* ¶ 133.

G. Expiration of Eligibility Restrictions. The Commission concludes its examination of LMDS eligibility restrictions by inquiring whether the competitive checklist of Section 271 of the 1996 Act for RBOCs, or the effective competition test of Section 623 of the Act for cable operators, are appropriate standards to use for a sunset of any restrictions. *Fourth Notice* ¶ 135. WebCel agrees with the *Fourth Notice's* indication that satisfaction of the checklist and other statutory criteria for RBOC entry into long-distance services is not "a reliable indicator of the appropriate level of local exchange competition" for purposes of LMDS eligibility restrictions. At the same time, and recognizing that the competitive "checklist" does not formally apply to non-BOC LECs, WebCel believes that the benefits of an easily administered, predictable rule outweigh the marginal utility that would arise from a standard tied more closely to the actual level of competition in local telephone markets. We do not object to a more flexible test that requires examination of market entry, share and market power in particular local exchange markets, but do not believe that this approach is required in order to realize the benefits of a cross-ownership restriction.

V. THE COMMISSION'S LMDS BAND PLAN SHOULD, IF POSSIBLE, BE REVISED TO CREATE TWO EQUAL SPECTRUM BLOCKS

The *Fourth Notice* allocates a total of 1,300 MHz, in three separate blocks, for LMDS. While WebCel appreciates the difficult work the Commission has undertaken to fashion this band plan, and its interest in assuring the commercial viability of broadband LMDS services, we are nonetheless concerned that the correct long-term solution is a band plan supporting

interactive services. This requires two, roughly equivalent spectrum blocks, separated by a sufficient but not overly broad guard band, and would support efficient, low-cost CPE, the largest proportion of LMDS network costs. WebCel views the Commission's spectrum allocation role in LMDS is essentially that of broadband "product developer" for American wireless consumers, because band plan decisions can have a profound impact on wireless services. Therefore, WebCel respectfully suggests that the Commission look below 27.5 GHz for other spectrum to achieve the best generational solution in LMDS for the country.

V. BELLCORE SHOULD BE PROHIBITED FROM CONDUCTING "PRE-AUCTION" LMDS BID ANALYSIS FOR THE BELL COMPANIES

Representatives of Bellcore have stated, in a public forum, that the company is prepared to conduct "pre-auction screening" of LMDS markets, "including analysis for bids and bid ceilings."[38] While Bellcore may or may not offer such services to third-parties, WebCel believes that these activities—even for out-of-region bidding by its RBOC owners—raise significant antitrust concerns and should be prohibited by the Commission.

[38] Presentation by Dr. Scott Seidel, Bellcore, at Telestrategies Conference, Arlington, Virginia, July 15, 1996.

CONCLUSION

Eligibility restrictions barring LECs and cable operators from bidding for, or acquiring, LMDS licensees within their service area should be imposed until these incumbents face effective competition for their core monopoly services. These restrictions are in the public interest and are necessary to meet the clear national policy objective of facilitating effective competition for local telephone and video programming services.

Respectfully submitted,

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THE ECONOMICS OF BIDDING FOR SCARCE RESOURCES: THE LESSONS OF MONOPOLY PREEMPTION AS APPLIED TO FCC AUCTIONS OF LMDS LICENSES

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Mr. Baseman received his graduate training in economics at Stanford University. His publications include articles on the economics of open entry and competition in markets characterized by economies of scale or scope.

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Introduction

The FCC currently is considering auction rules for LMDS licenses. This paper presents an economic analysis of the social benefits and social costs of preventing LECs and cable operators from bidding for LMDS licenses within their service areas. In particular, several states' attorneys general, WebCel, MCI and others have urged the Commission to ban LECs and cable MSOs temporarily from acquiring LMDS licenses until they face effective, facilities-based competition in their local service territories. I conclude that such a ban will improve social welfare, and therefore the Commission should not allow the LECs and MSOs to participate in the upcoming LMDS auctions for licenses within their service regions.

Section 1 of the paper analyses the social benefits of the bidding restriction. Monopolists have strong incentives to preemptively gain control of limited scarce resources necessary for competition. Incumbent monopolists place an anticompetitive valuation on LMDS licenses; control of the license means that competition for the monopoly will be foreclosed. Other potential bidders for LMDS licenses cannot realize that anticompetitive gain. As a result, incumbent monopolists can be expected to outbid all others for LMDS licenses, because the licenses are worth more to them than to others. Society loses, however, since consumers face either higher prices, less valuable services, or both.

The paper discusses the possible social costs of the proposed bidding restrictions in the affected markets in section 2, and conclude that the restrictions will impose no appreciable costs on society. There are no apparent physical or administrative economies between LMDS technology and existing wireline telephone or cable services. Nonetheless there could be social costs of the proposed bidding restriction if 1) because of economies of scope the best social use of LMDS technology is as a complement to the existing in-region services of the LECs or the MSOs, and 2) arms length negotiations between the LMDS license holder and the MSO or LEC could not also achieve equivalent economies of scope. The facts are not consistent with these conditions. Therefore, the proposed restrictions improve expected social welfare: they provide social benefits without imposing social costs.

Section 3 addresses revenue issues: will the bidding restriction reduce the revenues raised by the auctions? While that is a possibility, it is not a certainty. Thus, the Commission should not view application of bidding eligibility restrictions as necessarily sacrificing auction revenues to preserve the consumer benefits of competition.

1. The Social Benefits of Precluding LECs and MSOs from Bidding on LMDS Licenses in Their Service Territories.

Incumbent monopolists have incentives to outbid potential entrants for any scarce resources necessary to enter and compete. When they do so, this is referred to as "preemption."

Curtis and Lipsey (1979), Dasgupta and Stiglitz (1980), and Gilbert and Newberry (1982)[1] -- among others -- were instrumental in clarifying the intuition behind preemption. And the intuition is simple: the most an entrant can bid for a scarce resource (e.g., a necessary government license or an ore or oil reserve) is the profit an entrant earns in a duopoly market. The scarce resource is worth more to an incumbent monopolist, since by winning the bid for the resource, the monopoly profit stream can be retained. Since (absent perfect collusion) monopoly profits exceed duopoly profits, monopoly profits also exceed the entrant's share of duopoly profits. As Lewis (1983) described the analysis,[2]

> [The] argument is simple and appealing. Suppose the market can accommodate one more firm. The leader can prevent entry by spending more than the potential entrant to acquire the input necessary for production. The value of the input to the entrant equals the expected present value stream of its profits. This will be determined by competition with the leader which may take several forms. However, unless the post-entry equilibrium is cooperative, the input will be worth more to the dominant firm. [emphasis added] The reason is that the leader can at least utilize the input exactly as the entrant would have used it....but typically, the leader can improve on this by coordinating production [otherwise known as exercising market power].

Preemption may be either complete or partial. Under complete preemption, the monopolist is able profitably to acquire all alternative supply sources. Under partial preemption, the monopolist is only able profitably to acquire some of the alternative supply sources. Lewis showed that complete preemption of a scarce resource may not always be profitable, but that partial preemption is always profitable.[3] Both complete and partial preemption is bad -- economic

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[1]See Curtis Eaton and Richard Lipsey, "The Theory of Market Preemption: The Persistence of Excess Capacity and Monopoly in Growing Spatial Markets", *Economica*, May 1979, pp. 149-58; Partha Dasgupta and Joseph Stiglitz, "Uncertainty, Industrial Structure, and the Speed of R&D, *Bell Journal of Economics*, Spring 1980, pp. 1-28; and Richard Gilbert and David Newberry, "Preemptive Patenting and the Persistence of Monopoly, *American Economic Review*, June 1982, pp. 514-26.

[2]See Tracy R. Lewis, "Preemption, Divestiture, and Forward Contracting in a Market Dominated by a Single Firm", *American Economic Review*, December 1983, pp. 1091-1101.

[3]Complete preemption is sometimes unprofitable because of a free-rider effect. The dominant firm bears all of the necessary output restriction to exercise market power. With many alternative sources of competition, complete preemption becomes unprofitable because with each increment of the scarce resource controlled by the dominant firm, the value of the remaining units of the resource to others increases. Increased control of the scarce resource by the dominant firm leads to an increase in market price, which in turn leads to an increased valuation of the remaining uncontrolled capacity by the fringe players. Lewis shows that it is always profitable for a

welfare is reduced.[4]

Thus, the economies' literature of preemption establishes conclusively that complete preemption by a dominant firm of all alternatives for necessary scarce resources to challenge the dominant firm may be profitable, but even where complete preemption is not profitable, partial preemption will always be in the monopolist's economic interest. The lessons for LMDS auctions are clear. LMDS is a very promising alternative technology for distribution of local telephone service and for local distribution of video programming.[5] Thus, LMDS challenges the market power of both incumbent LECs and MSOs.[6] The RBOCs apparently regard LMDS as (potentially) an end-to-end substitute for local telephone service.[7] Moreover, while other technological alternatives to local telephone service and local video signal delivery may exist, those alternatives are either somewhat speculative (e.g., possible future allocations of other spectrum for these end uses), involve spectrums likely to be inherently less efficient for these end-

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dominant firm with market power to preempt the first alternative source of supply, but it may not be profitable (because of the free-rider effect described above) for the dominant firm to completely preempt all alternatives. (pp. 1095-6.) The major economic factors in determining the extent of preemption are the number of alternative sources, the capacity of the alternative sources relative to the installed capacity of the incumbent, and the market demand elasticity. The higher the market demand elasticity, the greater the cost (in terms of an output restriction) that the incumbent must bear to exercise market power.

[4]Ibid., p. 1099.

[5]Texas Instruments' LMDS system "will deliver data and telecommunications services to 15,000 to 18,000 customers per cell while supporting 224 digital video channels...", Multichannel News, Feb. 26, 1996. See also Douglas Gray, "Broadband Wireless Access Systems at 28 Ghz" *Communications Engineering & Design*, July 1996, pp. 46-56. Gray notes that "the advantages of wireless local access over competing broadband delivery systems is the significantly lower infrastructure cost and the time to market", p. 46.

[6]It is beyond the scope of this paper to assess the evidence that LECs and MSOs possess market power. Suffice it to say that it is hardly unreasonable to believe both do possess market power, and that the legal and regulatory environment presumes that both LECs and MSOs possess market power and that regulation is currently necessary to at least temper the adverse social effects of such market. It is another question, of course, whether the actual regulatory constraints on these firms actually improves social welfare.

[7]"LMDS could be a complete substitute for a wireline broadband build" according to Joseph Lemmon, director of network architecture for USWest. *Multichannel News*, June 17, 1996.

uses than LMDS (as would be the case for substantially smaller blocks of spectrum),[8] or rely on same technology entry (e.g., direct competition from other wireline facilities-based local telephone companies), the feasibility of which, at best, will depend critically on a regulatory environment that will be evolving over the next several years and, at worst, will not develop anytime in the near future.

Anticompetitive preemption of LMDS by incumbent monopolists is virtually certain absent the proposed bidding restriction. Consider the logical possibilities:

1) If LMDS is substantially more promising than other currently known alternative to local telephone and cable service[9], then preemption of LMDS by an incumbent monopolist is certain.

2) If LMDS is the best among several potential alternatives to the services of the LECs and MSOs, complete preemption may be profitable, in which case LMDS will be controlled by an incumbent monopolist.

3) Even if complete preemption is not profitable for the monopolist, partial preemption is always profitable (although socially undesirable), and the best candidate for partial preemption is the scarce resource with the highest near-term competitive potential. So preemption of LMDS is certain if it is the best among several alternative potential challengers to the LECs' monopoly, and likely if it is among those presenting the greatest potential for near term competition.

4) Finally, consider the only logical possibility where the proposed bidding restriction would not convey a social benefit. Suppose only partial preemption is profitable, and that LMDS would not be among the competitive alternatives incumbent LECs and MSOs would acquire. In that case the proposed ban conveys no social benefit. *But this is only because by assumption the LECs and MSOs will not acquire any LMDS spectrum rights.* It is hardly a

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[8]MMDS broadcast spectrum rights, for example, contain less than one-sixth of the bandwidth envisioned for LMDS, making LMDS more attractive for interactive services, such as telephony or video-on-demand. In addition, full use of MMDS spectrum requires sublicensing agreements with other applications of the spectrum, which is not always easy to achieve. See Michael Lafferty, "LMDS Formula Awaits Approval," *Communications Engineering & Design*, July 1996. MMDS in the future may improve due to technical change. It may then be able to offer reasonable interactive services. See Gray, op. cit. Gray argues MMDS indeed may be better than LMDS for broadcast video applications. Since the LECs are already allowed to own MMDS rights, they therefore already have the ability to use wireless technology to enter the video business.

[9]Other spectrum allocations may occur in the future. However, to the extent the future allocation is less certain, occurs farther in future, or involves spectrum that is less suitable for telephony and video services, the closer the relevant preemption model comes to the case where LMDS is the only alternative supply source. As a practical matter, if the only alternative to LMDS is the possibility of another broadband spectrum auction a few or more years down the road, we can expect preemption of LMDS today.

compelling objection to the proposed restriction to say it prevents the monopoly LECs and MSOs from doing something they are not going to do anyway.[10]

The discussion thus far has assumed there are no efficiency advantages from either the LEC or an MSO from controlling LMDS spectrum in their service territory. If there are no efficiencies, then the anticompetitive effects from preemption clearly control the choice, and LEC and MSO ownership of LMDS spectrum should not be allowed in the near term, until competition takes hold. Therefore, we now turn to a discussion of potential efficiencies.

2. There are No Plausible Efficiencies from MSO or LEC Control of LMDS Spectrum

Incumbents may argue that such a bidding eligibility exclusion denies them the opportunity to realize economies of scope Thus, the LECs or MSOs may argue that they are particularly well suited to challenge the other, and the bidding ban sacrifices potential economies between LMDS and their existing operations. A plausible argument against the proposed bidding restrictions might be raised if economies of scope between incumbent and entrant operations were sacrificed. For that to be the case, 1) there must be economies of scope between the incumbent and LMDS, and 2) there must be good reason to believe that those efficiencies could not be efficiently realized via transactions between independent entities.

a. Possible Arguments of the LECs

The LECs have not argued that there are inherent efficiencies from their ownership of LMDS rights. Moreover, they do not seem to have any valid arguments supporting a claim that society loses something unless they are allowed to bid for LMDS. Consider the possible sources of scope economies: physical (hardware) economies, marketing and brand name economies, administrative economies, and economies of network coordination.

i. Physical Economies

According to some LECs, "LMDS could be a complete substitute for a wireline broadband build"[11]. If LMDS is a complete substitute for the wireline facilities to provide broadband services, then the LECs bring nothing special to the table. Other bidders can also build their own complete system, and LEC participation in LMDS would realize no scope economies.

ii. Marketing and Brand Names

Neither of these is at all unique to the LECs. Moreover, we should not presume that a strong existing brand name will be required to launch LMDS service. However, if a strong brand

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[10]Moreover, this case assumes other alternatives are either better than LMDS, or that LMDS is among several comparable alternatives, and that LMDS is not preempted because other alternatives are. This, in turn, assumes that antitrust and communications regulators allow this other, even more anticompetitive, preemption to occur. This is very unlikely.

[11]See footnote 7, supra.

name turns out to be a commercial advantage, other entities with well-established brand names (including, but not limited to, the major IXCs, local non-telephone utilities, and out-of-region LECs and MSOs) will end up either winning LMDS auctions, or forming some sort of joint venture with more entrepreneurial auction winners who need access to a consumer-recognized brand.

iii. Administrative Economies

One should not assume that large companies will perform administrative functions more effectively than smaller, more entrepreneurial companies. Indeed, it is generally believed that administration is a function characterized by diseconomies of scale or scope for which incumbent monopolist would have higher costs than new entrants. However, even if it turns out that successful launch of LMDS-based products is best accomplished by or in conjunction with an entity with a substantial local administrative presence, other entities (e.g., IXCs or other local utilities), should be able to provide these services at least as cheaply as the LECs.

iv. Network (Interconnection) Economies

The clear anticompetitive potential from LEC participation in LMDS cannot be offset by network economies between wireline and LMDS-based telephone systems. Obviously, because the telephone network provides interactive services, the use of LMDS for telephony will be most efficient if LMDS license holders can interconnect efficiently with other networks (including the LECs) to provide telephone service, and purchase unbundled elements or resell LECs' local service in order to fill out their networks. Otherwise, denial of reasonable interconnections by the larger network imposes a substantial cost disadvantage on a smaller network.

The Telecommunications Act of 1996 specifically addresses these issues. It contemplates effective and appropriate regulation of both interconnection charges between incumbents and local telephone entrants and the pricing of unbundled elements of local exchange service sought by new entrants. The FCC and/or state regulators are presumed to be able to effectuate such regulation. If this works, the proposed bidding restrictions would have no social costs. LMDS spectrum owners could interconnect with and procure access to complimentary physical components of the LECs networks on reasonable terms. Therefore, society gets the advantage of network economies between LMDS and wireline facilities without LEC ownership of the LMDS spectrum.

If regulators fall short of being able to enforce nondiscriminatory access by others to the LECs bottleneck facilities, then the bidding restrictions are clearly desirable. The failure of regulators to adequately foster entry based in part on renting the ILECs' facilities implies that facilities-based entry becomes all the more important.[12]

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[12] Even if regulators were to err on the opposite side -- by mandating prices for unbundled elements that are "too low"-- an inappropriate auction rule cannot rectify the situation. Prices for unbundled elements that are set "too low" to support continued investment in conventional local telecommunications facilities are clearly a problem; however allowing local telco bidding on

To conclude, the social decision is clear. Incumbent LECs should not be allowed to bid on LMDS rights.. If they acknowledge that interconnection and unbundled element price regulation will be effective, there is no social reason for allowing them to bid on LMDS licenses.[13] Economies of network coordination will be achieved without LEC ownership of LMDS, and no other economies of scope between incumbent LECs and LMDS are plausible. However, if they argue that such regulation cannot be effective, there is an especially strong reason to ban LEC bidding on LMDS rights; for such rights may present the best social chance for reducing (albeit gradually) the LECs' market power.

b. The MSOs

i. Video Services

The case against MSO bidding for LMDS licenses is different than the case against the LECs. In the LEC case, this paper demonstrated that, because telephony involves customer-to-customer interaction, there are network economies to be realized through coordination between LMDS license holders and the incumbent LEC. However, those economies could be realized through regulated transactions, and thus ownership of the LMDS spectrum by the LEC was unnecessary. Apart from these network economies, other potential economies of scope are nonexistent.

There are no plausible economies of scope between LMDS and the MSOs' for video services. For instance, LMDS is an effective way to deliver video on demand. This does not imply economies of scope between MSOs operations and LMDS. An independent owner of the LMDS rights can also devote the segment of the spectrum used for video exclusively to video on demand. The difference will be that video on demand and scheduled video programming (because they are substitutes for one another) will be sold to consumers at lower prices if they are controlled independently. This conclusion holds with even more force if an independent owner of LMDS would provide some scheduled programming, and thereby provide an even closer substitute for the MSOs services than an entirely video on demand offering.

Marketing, brand name, or administrative scope economies between LMDS and MSOs' cable operations apply are highly unlikely. In particular, given the cable industry's often criticized record for customer service, it seems highly unlikely that the feasibility of LMDS technology

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LMDS rights will not counterbalance the (hypothetical) original problem.

[13]The LECs may argue that a) physical coordination between LMDS and their facilities is necessary to efficiently provide video services, but that b) an arm's length agreement on video with an independent LMDS operator is unlikely if the LMDS company is a competitor in telephony. Even if a) is true, and even if b) would be true without regulation, the fact of the matter is that, under the 1996 Act, other companies are entitled to buy unbundled (telephone) elements on reasonable terms. Assuming that regulation is effective, the LEC cannot hinder LMDS-related telephone competition. At that point, it then has every incentive to coordinate with LMDS owners to address video services.

could grievously be argued to depend on whether LMDS can share administrative resources with the cable industry. The same evidence that marketing or brand name economies are inconsequential for the LECs applies to the MSOs as well.

ii. Telephony

Any case for efficiencies between LMDS and cable systems must then be limited to the provision of telephone service That is, will allowing MSOs to own LMDS increase society's prospects for meaningful entry into telephone service? This is not very likely for four reasons.

First, there is evidence that the provision of telephone service via the cable companies' infrastructure is extremely unlikely, at least in the near term, due to many technical hurdles inherent today through out their existing networks. Thus, the premise that MSOs will compete in telephony is subject to serious doubt.[14]

Second, the MSOs will have access to unbundled network elements from the LECs under the 1996 Act, and therefore (if the regulations work) should not need to rely on LMDS to fill out their telephone networks.

Third, MSOs can contract on a mutually agreeable basis with independent LMDS owners to collaborate in providing telephone service, if that is the efficient way to go. The MSOs may argue that such agreements are unlikely, because cable and LMDS are going to competitors for video services. This might well be true, but note what it implies. The MSOs would be saying that competition for telephony that combines cable and LMDS can't develop unless they own LMDS, and are therefore in a position to prevent LMDS from competing with their existing cable services.

Fourth, MSOs might well choose to pull their punches in providing competition to the LECs if they control LMDS. The ideal owner of LMDS is someone against whom the incumbent monopolist cannot easily retaliate when entry is attempted. The MSOs (and LECs) do not fit that bill. The LECs have been investing in broadband infrastructure. They hope to soon be positioned to compete for video services even absent LMDS. If the MSO controls LMDS, both the local cable and telephone companies will hold credible "hostages" that will tend to deter entry by the other. In particular, the LEC may choose not to enter video services knowing that to do so will provoke retaliation by the MSO, who will provide telephone service using LMDS. And the MSO may similarly reason that entry into the telephone business using LMDS is not wise, for it will lead to retaliatory entry into video services by the LEC. There is a possibility, therefore, that MSO ownership of LMDS may result in a "no-entry stalemate," with each monopolist rationally deciding that the risk to its existing monopoly revenue stream outweighs the potential gain from

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[14]See "Telephony Takes Back Seat at Show", *Multichannel News*, May 6, 1996, and "In Telecommunication a Tough Act to Follow", *Washington Post*, August, 11, 1996, pp. H1 and H6, for two recent discussion how far the cable industry is from being able to compete in local telephony.

entering the other monopoly. This possibility will not exist if LMDS is owned by a third party without local monopoly revenues to protect. Their entry decisions will not be affected by fears of retaliation.[15]

3. Implications of a Bidding Limitation on Auction Revenues

One should not assume that the Government's revenues from the LMDS auctions will be lower if LECs and MSOs are not allowed to bid. If there is little uncertainty over the value of the spectrum, adding a single monopolist to the pool of bidders will therefore not affect auction revenues. The monopolist will win the bid at only slightly more than the competitive value, since that is all it takes to win.

If there is significant uncertainty over the value of LMDS spectrum, then the number of bidders will affect auction revenues. However, adding the LECs and MSOs to the auction will not necessarily increase the number of bidders. Auction participation requires potential bidders to place at risk a significant investment. These expenditures include the costs of research to estimate demand, the costs of reaching vendor partnering agreements, the costs of establishing detailed build-out plans (since the value of the license is affected by the capital and operating costs of the system to be built), the costs of committing to "production slots" to ensure timely delivery of specialized manufactured components, and the costs of raising capital from a variety of sources, many of them geographically specific to the market being bid on.

Companies will not incur such up-front costs to participate in an effort that is certain to lose; nor can sources of venture capital be expected for such efforts. Thus, if other participants believe that the incumbent monopolist will prevail in bidding (which is just what the preemption theory says will happen if everyone has full information), then alternative bidders will not bid. This is especially true in an English auction such as the FCC will likely run for LMDS. In such an auction, each bidder can submit a sequence of bids, and knows what the prevailing high bid is at

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[15]The FCC asked for comments on the "partiality" issue. For example, if an MSO controls less than X% of the cable business in an LMDS auction territory, should it be allowed to bid? The answer, for any given X, depends on whether the LMDS owner can discriminate in price or quality within the LMDS territory. We understand, based on discussions with WebCel personnel, that given current LMDS technology, quality discrimination appears feasible, since the footprint of each LMDS cell is relatively small, and can be subdivided into quadrants or sectors to target services, thus delivering different services or signals to different areas. For example, an MSO could offer only video on demand within its cable service territory, but offer video on demand plus scheduled broadcast programming services in other areas outside its service territory. And (absent additional regulations), price discrimination is clearly feasible. For example, an MSO could offer the same services throughout the LMDS territory, but charge higher prices in its cable service territory, so as not to cannibalize its own cable revenues.

With discrimination, there is no magic X below which the use of LMDS will not be affected by existing market power. A smaller X means only that fewer customers are monopolized.

all times. There is no chance the monopolist will make a mistake and accidentally be outbid by somebody else.[16] Thus, auction revenues could fall if a single incumbent with market power were allowed to bid. All competitive bidders have strong incentives not to spend the money necessary to prepare a bid, knowing ultimately they will be outbid by someone who (because of market power) values the license more highly. The price of LMDS spectrum will be determined, in part, by the number of bidders.[17] Adding the LECs and the MSOs as bidders will not increase the total number of bidders if other participants drop out.

The case for higher government revenues from allowing MSOs and LECs to bid would appear to depend on a bidding war between the two incumbent monopolists for control of LMDS.. This might happen if each saw a similar market-power-preserving advantage from controlling LMDS. Then the value of the winning bid will increase by lesser of the two monopoly valuations. The entity with the most market power placed at risk by LMDS need only bid slightly more than the other monopolist to win. Whether this effect will offset the effect on expected bid revenues from the absence of other bidders is a complex empirical question. However, the FCC should not presume that disallowing MSO and LEC participation in LMDS auctions will necessarily reduce auction revenues, for it is possible that adverse revenue effect from losing competitive bidders (who choose not to participate when the MSOs and LECs are allowed in) will predominate.

4. Conclusion

The LECs and cable operators should not be allowed to acquire rights to LMDS spectrum until they face more significant facilities-based competition in their service areas. LMDS spectrum auctions provide a significant opportunity for greater competition to develop against each of these local monopolists. This paper argues that no efficiencies can be expected from cable or telco ownership of LMDS rights in their service areas. Neither the telcos nor the cable companies have presented cogent arguments that society will benefit from efficiencies if either of them owns LMDS. However, society incurs significant costs from the suppression of competition that occurs when a monopolist is allowed to preempt alternative supply sources. Thus, LEC or

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[16]This possibility would exist in a sealed bid auction.

[17]The LMDS auctions comprise elements of both private value auctions and common value auctions. In private value auctions, each bidder must incur expenses to determine the value of the item to him or her. The private valuations may differ substantially across bidders. Auctions revenues are increased by adding the right kind of additional bidders, i.e. bidders whose private valuations are likely to be high. In common value auctions, the main source of uncertainty is the inherent value of the item, but the ultimate valuation may not depend on who wins the bid. This characterization may well be appropriate for FCC spectrum auctions. The ultimate value of the spectrum will depend largely on evolution of LMDS technology and costs, relative to competing technologies. In common value English auctions, expected revenues increase with the number of bidders. Adding bidders increases the possibility that optimists (those whose value estimate is high) will bid.

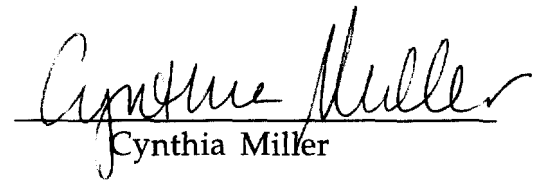
MSO ownership of LMDS rights covering their service territories fails a cost-benefit test.

There is nothing novel in my analysis. For example, under the Merger Guidelines, as practiced by the Reagan, Bush, and Clinton administrations if one party to a proposed horizontal merger already possessed market power, the merger would be opposed absent significant efficiencies

Finally, one should not necessarily assume that temporarily eliminating the MSOs and LECs from ownership of LMDS will reduce the Government's auction revenues. The participation of the LECs and MSOs can be expected to cause other bidders to drop out. If the number of bidders affects the Government's expected auction revenues, the effect of adding the LECs and MSOs, but losing other bidders, is ambiguous.

CERTIFICATE OF SERVICE

I, Cynthia Miller, do hereby certify on this 12th day of August, 1996, that I have served a copy of the foregoing document via messenger to the parties below:



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